

Remarks/Arguments

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference signs mentioned in the description: "76 and 80".

A corrected replacement drawing sheet in compliance with 37 CFR 1.121(d) is submitted with this response for Figure 5.

Claim Rejections - 35 USC §§112, 102 and 103

Claims 1-14 are at issue. Claims 7 and 14 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention. Claims 1, 4, 7, 10 and 11 are rejected under 35 USC 102(b) as being anticipated by Pyle. (US 4,653,770). Claims 2, 3, 5, 6, 8, 9 and 12-14 are rejected under 35 USC 103(a) as being unpatentable over Pyle (US 4,653,770) and Applicant's admitted prior art.

Claims 7 and 14 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

Claims 7 and 14 are amended and are now in condition for allowance.

Claim 1 is rejected under 35 USC 102(b) as being anticipated by Pyle. (US 4,653,770). Claim 1 is a self-contained trailer braking system that comprises a fifth wheel hitch attached to a trailer frame, where the trailer hitch further comprises a kingpin to engage a fifth wheel of a towing vehicle; a sliding mechanism attached to the kingpin, where the sliding mechanism is slidably captured within the trailer frame and can move between a forward position and a rear position; a

spring attached to the sliding mechanism and the trailer frame, where the spring biases the sliding member to the forward position; a brake actuator mounted to the trailer frame and linked to the sliding mechanism; a brake assembly attached to the brake actuator; and a power supply attached to the brake assembly, where power is applied to the brake assembly when the sliding mechanism is away from the forward position.

Pyle is directed to a hydraulic fifth wheel system that is not self-contained. Pyle requires the use of hydraulic energy from the towing vehicle to supply power to the trailer's brakes. The master cylinder of Pyle's fifth wheel is connected to the hydraulic system of the towed vehicle (Col. 2, lines 32-34). Pyle provides no other means for power to be transmitted to the trailer brakes

By contrast, applicant's Claim 1 is directed to a self-contained trailer braking system. The applicant's system allows any truck with a trailer hitch to safely pull and stop a trailer without any coupling between the trailer and the towing vehicle except for the trailer hitch (page 5, lines 13-15). The trailer braking system includes a fifth-wheel trailer hitch, an energy transfer mechanism, a brake actuator, and a power generator all attached to a trailer with brakes (page 6, lines 3-4 and page 9, lines 3-5). Pyle has no energy transfer mechanism and no power generator attached to the trailer. In use, the hitch framework on the towing vehicle and the trailer are subject to a tremendous amount of force and energy due to dynamic trailer loads. The self-contained trailer brake system can use these forces to activate the trailer's braking system, eliminating the dependence on specialized towing vehicles with pneumatic, hydraulic, electric or cable-operated systems (page 6, lines 14-17). The applicant's fifth wheel hitch mechanism harnesses the inertia

energy of the trailer to operate the trailer brakes (page 14, lines 1-4). The power generator that is attached to the trailer can supply braking energy that is metered through the energy transfer mechanism (page 9, lines 8-14).

The Pyle system is a specialized, dedicated system meant to replace most of the commonly-found parts of a standard fifth wheel hitch. For example, Pyle requires that his hydraulic fifth wheel be installed upon a towing vehicle's king pin (Col. 1, lines 56-58). Further, Pyle requires an upright post from the wrist pin assembly of the fifth wheel to receive the arm of a trailer (Col. 1, lines 59-62). Pyle's system is not a standard fifth wheel hitch. Pyle's system appears to be inverted and heavily modified from the norm.

By contrast, Claim 1 is directed to a self-contained trailer braking system that relies upon standard hitches to operate properly (page 5, line 17 to page 6, line 2 and page 6, lines 17-19). The energy transfer mechanism includes a special hitch plate with a slot oriented fore and aft down through which a kingpin protrudes to engage the towing vehicle's fifth-wheel (page 6, lines 8-9). The special part of the hitch plate is the slot to allow the trailer's kingpin to move during braking. This is a standard arrangement: the trailer has a kingpin and the towing vehicle has the fifth wheel hitch. The standard fifth wheel hitch engages the trailer's kingpin.

Applicant's device is directed to a self-contained trailer braking system that is compatible with virtually every standard fifth wheel hitch.

Claim 1 is allowable.

Claims 2-11 are allowable as being dependent from an allowable base claim.

Claim 12 is rejected under 35 USC 103(a) as being unpatentable over Pyle (US 4,653,770) and Applicant's admitted prior art. Claim 12 is a self-contained trailer braking system that comprises a fifth wheel hitch attached to a trailer frame, where the trailer hitch further comprises a kingpin to engage a fifth wheel of a towing vehicle; a sliding mechanism attached to the kingpin, where the sliding mechanism is slidably captured within the trailer frame and can move between a forward position and a rear position; a coil spring attached to the sliding mechanism and the trailer frame, where the coil spring biases the sliding member to the forward position; a brake actuator mounted to the trailer frame and linked to the sliding mechanism; a brake assembly attached to the brake actuator; and a power generator attached to the brake assembly, wherein the power generator supplies pneumatic energy for the brake assembly, wherein power is applied to the brake assembly when the sliding mechanism is away from the forward position.

Pyle is directed to a hydraulic fifth wheel system that is not self-contained. Pyle requires the use of hydraulic energy from the towing vehicle to supply power to the trailer's brakes. The master cylinder of Pyle's fifth wheel is connected to the hydraulic system of the towed vehicle (Col. 2, lines 32-34). Pyle provides no other means for power to be transmitted to the trailer brakes

By contrast, applicant's Claim 12 is directed to a self-contained trailer braking system. The applicant's system allows any truck with a trailer hitch to safely pull and stop a trailer without any coupling between the trailer and the towing vehicle except for the trailer hitch (page 5, lines 13-15). The trailer braking system includes a fifth-wheel trailer hitch, an energy transfer mechanism, a brake actuator, and a power generator all attached to a trailer with brakes (page 6, lines 3-4 and

page 9, lines 3-5). Pyle has no energy transfer mechanism and no power generator attached to the trailer. In use, the hitch framework on the towing vehicle and the trailer are subject to a tremendous amount of force and energy due to dynamic trailer loads. The applicant's self-contained trailer brake system can use these forces to activate the trailer's braking system, eliminating the dependence on specialized towing vehicles with pneumatic, hydraulic, electric or cable-operated systems (page 6, lines 14-17). The applicant's fifth wheel hitch mechanism harnesses the inertia energy of the trailer to operate the trailer brakes (page 14, lines 1-4). The power generator that is attached to the trailer can supply braking energy that is metered through the energy transfer mechanism (page 9, lines 8-14). Applicant's trailer-mounted generator provides, hydraulic, pneumatic, or electric power, or any combination that is appropriate for a particular trailer (page 9, lines 11-14).

The Pyle system is a specialized, dedicated system meant to replace most, if not all, of the commonly-found parts of a standard fifth wheel hitch. For example, Pyle requires that his hydraulic fifth wheel be installed upon a towing vehicle's king pin (Col. 1, lines 56-58). Further, Pyle requires an upright post from the wrist pin assembly of the fifth wheel to receive the arm of a trailer (Col. 1, lines 59-62). Pyle's system is not a standard fifth wheel hitch. Pyle's system appears to be inverted and heavily modified from the norm.

By contrast, Claim 12 is directed to a self-contained trailer braking system that relies upon standard hitches to operate properly (page 5, line 17 to page 6, line 2 and page 6, lines 17-19).

Applicant's device is directed to a self-contained trailer braking system that is compatible with virtually every standard fifth wheel hitch.

Claims 13-14 are allowable as being dependent from an allowable base claim.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,
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I hereby certify that a Response and Amendment is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on:

January 29, 2005
Date


Signature (Timothy M. Barlow)